I CLAIM:

1. A method for controlling an at least partially automated vehicular mechanical transmission system comprising a fuel-controlled engine, an engine controller for controlling fueling of the engine in accordance with command output signals, a multiple-speed mechanical transmission having an input shaft driven by the engine and an output shaft and a control unit for receiving input signals and processing same according to predetermined logic rules to issue command output signals, said method characterized by:

determining a level of engine fueling required to cause substantially zero torque to the input shaft under current vehicle operating conditions; and

controlling said system as a function of said level of engine fueling.

2. The method of claim 1 wherein said level of engine fueling is the engine fuel required to cause T_{EG} to ~~about~~ substantially equal the sum of T_{BEF}, T_{ACCES} and T_{ACCEL} where

T_{EG} = gross engine torque;

T_{BEF} = base engine friction torque;

T_{ACCES} = accessory torque; and

T_{ACCEL} = torque to accelerate the engine.

3. The method of claim 1 wherein said level of engine fueling is the engine fuel required to cause T_{EG} to ~~about~~ substantially equal the sum of T_{BEF} and T_{ACCES} where

T_{EG} = gross engine torque;

T_{BEF} = base engine friction torque; and

T_{ACCES} = accessory torque.

4. The method of claim 2 wherein said engine communicates with said control unit by means of an electronic data link and said command output signals include a signal transmitted on said data link and requiring the engine to develop a specified gross engine torque (T_{EG}).

5. The method of claim 3 wherein said engine communicates with said control unit by means of an electronic data link and said command output signals include a signal transmitted on said data link and requiring the engine to develop a specified gross engine torque (T_{EG}).

6. The method of claim 1 wherein said system includes a sensor for sensing operator-set throttle position and for providing an input signal indicative thereof, said method further comprising causing said engine to be fueled at said level of engine fueling for a first period of time upon sensing said throttle pedal being moved to a minimum displacement position thereof.

7. The method of claim 6 wherein said first period of time is about 300 to 450 milliseconds.

8. The method fo claim 1 wherein said system includes a sensor for sensing operator-set throttle position and for providing an input signal indicative thereof, said method further comprising causing said engine to be fueled at said level of engine fueling for a second period of time upon sensing said throttle pedal being moved from a minimum displacement position thereof.

9. The method of claim 8 wherein said second period of time is about 100 to 300 milliseconds.

10. The method of claim 2 wherein said system includes a sensor for sensing operator-set throttle position and for providing an input signal indicative thereof, said method further comprising causing said engine to be fueled at said level of engine fueling for a first period of time upon sensing said throttle pedal being moved to a minimum displacement position thereof.

11. The method of claim 10 wherein said first period of time is about 300 to 450 milliseconds.

12. The method of claim 2 wherein said system includes a sensor for sensing operator-set throttle position and for providing an input signal indicative thereof, said method further comprising causing said engine to be fueled at said level of engine fueling for a second period of time upon sensing said throttle pedal being moved from a minimum displacement position thereof.

13. The method of claim 12 wherein said second period of time is about 100 to 300 milliseconds.

14. The method of claim 1 wherein said system includes a transmission controller for controlling shifting of said transmission in accordance with command output signals, said method further comprising causing said engine to be fueled at said level of engine fueling when disengaging of a transmission ratio is required.

15. The method of claim 2 wherein said system includes a transmission controller for controlling shifting of said transmission in accordance with command output signals, said method further comprising causing said engine to be fueled at said level of engine fueling when disengaging of a transmission ratio is required.

16. The method of claim 2 wherein said system includes a transmission controller for controlling shifting of said transmission in accordance with command output signals, said method further comprising causing said engine to be fueled at said level of engine fueling when engaging of a transmission ratio is required.

17. The method of claim 1 wherein said system includes a transmission controller for controlling shifting of said transmission in accordance with command output signals, said method further comprising

causing said engine to be fueled at said level of engine fueling when engaging of a transmission ratio is required.

18. The method of claim 1 wherein said engine has a first mode of operation wherein engine fueling is in accordance with operator demand and a second mode of operation wherein engine fueling is not a function of operator demand, said method further comprising causing said engine to be fueled to said level of engine fueling when transitioning from said second to said first mode of operation.

19. The method of claim 2 wherein said engine has a first mode of operation wherein engine fueling is in accordance with operator demand and a second mode of operation wherein engine fueling is not a function of operator demand, said method further comprising causing said engine to be fueled to said level of engine fueling when transitioning from said second to said first mode of operation.

20. The method of claim 14 wherein said engine is caused to be fueled at a level dithering about said level of engine fueling when disengaging of a transmission ratio is required.

21. The method of claim 15 wherein said engine is caused to be fueled at a level dithering about said level of engine fueling when disengaging of a transmission ratio is required.

22. The method of claim 16 wherein said engine is caused to be fueled at a level dithering about said level of engine fueling when engaging of a transmission ratio is required.

23. The method of claim 17 wherein said engine is caused to be fueled at a level dithering about said level of engine fueling when engaging of a transmission ratio is required.

24. A vehicular semi-automated shift implementation system comprising:

a manually shifted transmission having an input shaft driven by a fuel-controlled engine, an output shaft and a plurality of selectably engageable and disengageable jaw clutches allowing selection of a plurality of drive ratios and neutral, said jaw clutches selectively positioned by a manually operated shift lever having a plurality of selectable shift lever positions defining a shift pattern;

means for determining a level of engine fueling required to cause substantially zero torque to the input shaft under current vehicle operating conditions; and

means to sense conditions indicative of an operator intention to shift said transmission into neutral and effective, upon sensing conditions indicative of an operator intention to shift into neutral, to automatically cause said engine to be fueled to said level of engine fueling.

25. The system of claim 24 wherein said level of engine fueling is the engine fuel required to cause T_{EG} to ~~about~~ substantially equal the sum of T_{BEF}, T_{ACCES} and T_{ACCEL} where

T_{EG} = gross engine torque;

T_{BEF} = base engine friction torque;

T_{ACCES} = accessory torque; and

T_{ACCEL} = torque to accelerate the engine.

26. The system of claim 24 wherein said jaw clutches are non-synchronized jaw clutches.

27. The system of claim 24 wherein said transmission is a splitter-type compound transmission and said means are effective, upon sensing conditions indicative of an operator intention to shift into neutral, to automatically preselect a splitter shift.

28. The system of claim 24 wherein said conditions comprise operator manipulation of the shift lever.

29. The system of claim 24 further comprising an intent-to-shift switch, said conditions comprising operation of said switch.

30. The system of claim 29 wherein said switch comprises a manually operated button located on said shift lever.

31. The control method of claim 2 wherein said engine and said control unit communicate over an electronic data link (DL) carrying signals indicative of gross engine torque (T_{EG}) and base engine friction torque (T_{BEF}).

32. The system of claim 25 wherein said engine and said control unit communicate over an electronic data link (DL) carrying signals indicative of gross engine torque (T_{EG}) and base engine friction torque (T_{BEF}).

33. The system of claim 24 wherein said conditions comprise the operator requesting a minimal amount of fueling.

34. The system of claim 25 wherein said conditions comprise the operator requesting greater than a minimal amount of fueling.